

THE WEATHER OF THE MONTH.

By Mr. WM. B. STOCKMAN, Chief, Division of Meteorological Records.

PRESSURE.

The distribution of mean atmospheric pressure is graphically shown on Chart VIII and the average values and departures from normal are shown in Tables I and VI.

The mean pressure for the month was high over the States south of New England and the Lake region, with the crest over western Virginia and eastern West Virginia. It was low over eastern California and the southern Plateau region, with the minimum pressure over southern Arizona.

The mean pressure was above the normal over the entire country, the greatest departures from the normal occurring over southwestern Virginia, north-central Colorado, northwestern Arizona, western Nevada, and east-central California.

The mean pressure increased over that of July, 1904, except in the southern portions of Alabama and Mississippi, southeastern Louisiana, and Florida, except the extreme northeastern portion, the greatest increase occurring over the southern Plateau region.

TEMPERATURE OF THE AIR.

The distribution of maximum, minimum, and average surface temperatures is graphically shown by the lines on Chart V.

The mean temperature for the month was above the normal in eastern and central Kentucky, eastern Tennessee, western North Carolina, northeastern Georgia, northwestern Texas, eastern New Mexico, western Nebraska, southwestern South Dakota, Wyoming, central and western Montana, Idaho, southwestern Utah, and the Pacific States, except on the immediate coast from central California northward; elsewhere the mean temperature was below the normal, the greatest minus departures, as a rule, occurring in the northeastern and north-central States, and the greatest plus departures over the northern Plateau regions and southern California.

The average temperatures for the several geographic districts and the departures from the normal values are shown in the following table:

Average temperatures and departures from normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Accumulated departures since January 1.	Average departures since January 1.
New England	8	65.3	-1.5	-15.9	-2.0
Middle Atlantic	12	72.1	-0.9	-16.7	-2.1
South Atlantic	10	77.6	-0.3	-11.8	-1.5
Florida Peninsula*	8	80.6	-0.8	+0.7	+0.1
East Gulf	9	78.8	-0.7	-7.5	-0.9
West Gulf	7	80.3	-0.3	+2.0	+0.2
Ohio Valley and Tennessee	11	73.9	-0.6	-16.3	-2.0
Lower Lake	8	67.4	-2.1	-20.8	-2.6
Upper Lake	10	63.4	-2.5	-21.9	-2.7
North Dakota*	8	64.7	-1.6	-20.6	-2.6
Upper Mississippi Valley	11	70.3	-2.5	-22.3	-2.8
Missouri Valley	11	72.1	-0.9	-9.6	-1.2
Northern Slope	7	68.2	+0.3	+2.5	+0.3
Middle Slope	6	74.3	-0.3	+8.5	+0.4
Southern Slope*	6	78.8	-0.1	+9.6	+1.2
Southern Plateau*	13	75.6	-1.0	+4.0	+0.5
Middle Plateau*	8	70.1	+0.3	+2.6	+0.3
Northern Plateau*	12	70.7	+2.5	+15.2	+1.9
North Pacific	7	60.8	-0.6	-1.2	-0.2
Middle Pacific	5	63.8	-0.9	+1.5	+0.2
South Pacific	4	73.0	+1.6	+5.5	+0.7

*Regular Weather Bureau and selected voluntary stations.

In Canada.—Prof. R. F. Stupart says:

The temperature was below the average throughout the Dominion, if we except a few isolated localities, where the average was just maintained, and in Cariboo, in northern British Columbia, where it was exceeded by 1°. The most pronounced negative departures occurred in Ontario, varying from 2° to as much as 6° in some localities. Western Quebec was from 2° to 3° below; the greater part of the Northwest Territories from 2° to 4° below, and southwestern Nova Scotia 3° below.

By geographic districts the temperature was above the nor-

mal in the northern slope, northern and middle Plateau, and south Pacific regions, and below the normal in all other districts.

Maximum temperatures of 100°, or higher, were reported from portions of the following States: Texas, Oklahoma and Indian Territory, interior California, western Arizona, southern Nevada, southwestern Idaho, interior Oregon, and eastern and central Washington; and 110°, or higher, from southeastern California and western Arizona.

Freezing temperatures occurred at scattered places in the Rocky Mountain regions.

The minimum temperature during August, since the establishment of the station, was equaled at Jupiter, Fla., Galveston, Tex., Columbia and Charleston, S. C., and Harrisburg, Pa.; and was lower by 1° at Alpena, Mich., and Binghamton, N. Y.; 3° at Denver, Colo.; 5° at Elkins, W. Va., and 7° at Richmond, Va.

PRECIPITATION.

The distribution of total monthly precipitation is shown on Chart III.

The distribution of precipitation was very irregular. Excesses ranging from 2 to 5 inches were reported from the interior of the South Atlantic States, southern portion of the east Gulf States, southeastern New York, southeastern Connecticut, northern Missouri, southern Minnesota, eastern South Dakota, the panhandle of Texas, and the northern portion of Arizona. The greatest deficiencies ranged from 2.0 to 3.3 inches and were reported from central Arkansas, the southwestern portions of Virginia and Ohio, eastern Maryland, and the extreme southern portion of New Jersey.

Average precipitation and departure from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
		Inches.		Inches.	Inches.
New England	8	4.57	118	+0.7	-1.3
Middle Atlantic	12	3.59	78	-1.0	-6.4
South Atlantic	10	6.16	97	-0.2	-8.6
Florida Peninsula*	8	7.80	107	+0.5	-0.7
East Gulf	9	6.84	126	+1.4	-11.0
West Gulf	7	2.07	58	-1.5	-5.3
Ohio Valley and Tennessee	11	2.78	80	-0.7	-6.5
Lower Lake	8	2.75	93	-0.2	+1.9
Upper Lake	10	2.71	93	-0.2	-1.6
North Dakota*	8	1.45	94	-0.1	+0.5
Upper Mississippi Valley	11	4.02	133	+1.0	-0.4
Missouri Valley	11	3.97	129	+0.9	+1.5
Northern Slope	7	1.06	84	-0.2	+0.2
Middle Slope	6	2.54	104	+0.1	+3.1
Southern Slope*	6	2.71	96	-0.1	+0.2
Southern Plateau*	13	2.93	205	+1.5	-0.9
Middle Plateau*	8	1.09	158	+0.4	+2.4
Northern Plateau*	12	0.25	56	-0.2	0.0
North Pacific	7	0.27	31	-0.6	0.0
Middle Pacific	5	0.03	100	0.0	+4.6
South Pacific	4	0.06	100	0.0	-0.5

*Regular Weather Bureau and selected voluntary stations.

In Canada.—Professor Stupart says:

The rainfall was below the average from Vancouver Island to Manitoba, except in a few isolated localities, noticeably at Calgary and Minnedosa, both these places recording a small positive departure. A slight deficiency occurred on the western shores of the Georgian Bay and Lakes Huron and Erie, also in counties from Peterboro to Carlton, but in Ontario, generally, the rainfall was greatly in excess of the average, as it likewise was in the Province of Quebec.

In the Maritime Provinces the average amount was exceeded by 2.6 inches at St. John, and at Halifax by 2.2 inches, but elsewhere, with few exceptions, the average quantity was not recorded. This was especially the case in portions of Prince Edward Island.

By geographic districts the precipitation was normal in the middle and south Pacific districts; above normal in New England, Florida Peninsula, east Gulf States, upper Mississippi and Missouri valleys, and the middle slope and middle and

southern Plateau regions. In the remaining districts it was below the normal.

The precipitation during the month was the lowest for August since the establishment of the station at North Head, and Tacoma, Wash., and the greatest at Elkins, W. Va., Flagstaff, Ariz., Hannibal, Mo., Taylor and Amarillo, Tex., Eastport, Me., Pocatello, Idaho, and Modena, Utah.

HAIL.

The following are the dates on which hail fell in the respective States:

Arizona, 2, 6, 8, 13, 15, 21, 23-25, 29, 31. California, 12, 16, 17, 24, 26, 27. Colorado, 3-9, 13-17, 19, 21, 23, 26, 27, 29-31. Connecticut, 2, 8. Idaho, 28. Illinois, 4, 10, 13, 15, 17, 21. Indiana, 10. Iowa, 6, 9, 17, 21, 22. Kansas, 9, 18. Kentucky, 1, 14-16, 25. Massachusetts, 1, 2. Michigan, 13, 15, 21. Minnesota, 1, 3, 8, 19, 20, 21. Mississippi, 1, 5, 26. Missouri, 9, 13, 15, 20. Montana, 11, 20, 28, 29, 31. Nebraska, 1-5, 7-9, 15, 17, 30, 31. Nevada, 1, 8, 12, 13, 15, 22, 26, 27. New Hampshire, 15. New Jersey, 8. New Mexico, 14, 24, 25, 28. New York, 14, 17. North Carolina, 6, 13. North Dakota, 8, 11, 18, 19. Ohio, 6, 10, 13, 14, 16. Oregon, 2, 5, 28. Pennsylvania, 5, 8, 16, 17, 18, 22. South Carolina, 15, 23, 26. South Dakota, 2, 3, 8, 9, 18-21, 28. Tennessee, 7, 14, 15. Texas, 21, 27. Utah, 7, 12, 21, 26, 27, 31. Virginia, 16, 18. Washington, 28. West Virginia, 1, 14. Wisconsin, 12, 15, 16, 21. Wyoming, 6, 8, 10, 11, 13, 17, 18, 20, 27, 28, 30.

HUMIDITY.

The relative humidity was normal in the Florida Peninsula, west Gulf States, lower Lakes, and middle Pacific region; below the normal in New England, upper Lakes, and north Pacific region, and above the normal in all other districts.

The averages by districts appear in the subjoined table:

Average relative humidity and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	80	- 2	Missouri Valley	63	+ 2
Middle Atlantic	77	+ 1	Northern Slope	57	+ 5
South Atlantic	83	+ 1	Middle Slope	63	+ 3
Florida Peninsula	80	0	Southern Slope	65	+ 4
East Gulf	83	+ 3	Southern Plateau	64	+ 3
West Gulf	75	0	Middle Plateau	47	+12
Ohio Valley and Tennessee ..	73	+ 1	Northern Plateau	38	+ 5
Lower Lake	71	0	North Pacific	76	- 3
Upper Lake	74	- 1	Middle Pacific	60	0
North Dakota	65	+ 1	South Pacific	67	+ 1
Upper Mississippi Valley	73	+ 3			

CLEAR SKY AND CLOUDINESS.

The cloudiness was normal in the South Atlantic States and northern slope; below the normal in New England, Florida Peninsula, west Gulf States, lower Lakes, and southern slope and northern Plateau regions. In the remaining districts it was above the average.

The distribution of clear sky is graphically shown on Chart IV, and the numerical values of average daylight cloudiness, both for individual stations and by geographic districts, appear in Table I.

The average cloudiness for the various districts, with departures from the normal, are shown in the following table:

Average cloudiness and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	4.8	- 0.2	Missouri Valley	4.2	+ 0.1
Middle Atlantic	5.2	+ 0.2	Northern Slope	3.7	0.0
South Atlantic	5.2	0.0	Middle Slope	4.5	+ 0.7
Florida Peninsula	4.3	- 0.4	Southern Slope	4.4	- 0.4
East Gulf	5.3	+ 1.0	Southern Plateau	4.4	+ 1.0
West Gulf	4.3	- 0.1	Middle Plateau	4.7	+ 1.9
Ohio Valley and Tennessee ..	4.7	+ 0.2	North Pacific	2.6	- 0.4
Lower Lake	4.1	+ 0.2	North Pacific	4.5	+ 0.5
Upper Lake	5.0	+ 0.2	Middle Pacific	4.7	+ 0.9
North Dakota	4.1	+ 0.2	South Pacific	2.8	+ 0.3
Upper Mississippi Valley	4.2	+ 0.1			

WIND.

The maximum wind velocity at each Weather Bureau station for a period of five minutes is given in Table I, which also gives the altitude of Weather Bureau anemometers above ground.

Following are the velocities of 50 miles and over per hour registered during the month:

Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Buffalo, N. Y.	20	58	sw.	Mount Tamalpais, Cal.	27	52	nw.
Do.	25	51	sw.	Point Reyes Light, Cal.	28	55	nw.
Cleveland, Ohio	25	50	nw.	Do.	29	53	nw.
Columbus, Ohio	13	60	nw.	St. Louis, Mo.	19	50	w.
Duluth, Minn.	12	51	nw.	St. Paul, Minn.	20	102	nw.
Knoxville, Tenn.	19	52	sw.	Sand Key, Fla.	18	50	se.
Lewiston, Idaho	28	55	w.	Sault Ste. Marie, Mich.	25	50	w.
Minneapolis, Minn.	20	54	nw.				

ATMOSPHERIC ELECTRICITY.

Numerical statistics relative to auroras and thunderstorms are given in Table IV, which shows the number of stations from which meteorological reports were received, and the number of such stations reporting thunderstorms (T) and auroras (A) in each State and on each day of the month, respectively.

Thunderstorms.—Reports of 7291 thunderstorms were received during the current month as against 7174 in 1903 and 9378 during the preceding month.

The dates on which the number of reports of thunderstorms for the whole country was most numerous were: 1st, 348; 2d, 338; 17th, 320; 15th, 314; 21st, 310.

Reports were most numerous from: Nebraska, 381; Florida, 323; Missouri, 314; Georgia, 280; Utah, 277; Colorado, 270.

Auroras.—The evenings on which bright moonlight must have interfered with observations of faint auroras are assumed to be the four preceding and following the dates of full moon, viz, August 21 to 29, inclusive.

In Canada: Thunderstorms were reported from Sydney, 2; Halifax, 2; Grand Manan, 2, 15; Yarmouth, 11; Father Point, 6; Quebec, 5, 6, 14, 16, 17, 25, 28; Montreal, 5, 16, 17, 23, 25; Kingston, 8, 10, 25; Toronto, 2, 7, 13, 16, 22, 25; White River, 4, 5, 12, 13, 24, 25; Port Stanley, 10, 13, 16, 25; Saugeen, 13, 15, 16, 22; Parry Sound, 16, 25; Port Arthur, 16, 24; Minnedosa, 3; Qu'Appelle, 3, 18, 19; Swift Current, 19; Calgary, 18; Banff, 7, 18; Edmonton, 10, 27; Barkerville, 27, 31; Hamilton, Bermuda, 2, 13, 24, 25.

Auroras were reported from Grand Manan, 3, 9; Father Point, 3, 31; Quebec, 3; Montreal, 3; Swift Current, 1.

DESCRIPTION OF TABLES AND CHARTS.

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For description of tables and charts see page 136 of REVIEW for March, 1904.